

APPARATUS AND METHOD OF PROVIDING SPATIALLY-SELECTIVE  
ON-LINE MASS OR VOLUME MEASUREMENTS OF MANUFACTURED  
ARTICLES

ABSTRACT OF THE DISCLOSURE

[0068] This invention relates to a method and apparatus for mass and/or volume measurements of manufactured articles. More particularly, this invention relates to a method and apparatus for mass and/or volume measurements that can be performed on-line in a part manufacturing process. On-line measurement of the mass or volume of material contained in a specific region of interest of the manufactured items is performed 100% on-line. Real-time process control information is based on real-time measurement of the mass or volume of material contained in a specific region of interest of a manufactured item. Automated quality control inspection for manufactured articles is based on real-time measurement of the mass or volume of material contained in a specific region of interest of manufactured items. A manufacturing closed-loop process is directly corrected to keep it within control limits based on real-time measurement of the mass or volume of material contained in a specific region of interest of manufactured items soon after these items are manufactured.